

P24712.A08

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### Listing of Claims:

1. – 69. (cancelled)

70. (previously presented) A process for preparing a metal hydride containing liquid for use as a fuel in a direct liquid fuel cell from a storage-stable concentrate, wherein the process comprises combining (a) a concentrate which comprises at least one metal hydride compound and a polar solvent and has a hydroxide ion concentration of at least about 7 moles per liter, and not more than about 2 % of the at least one metal hydride compound decomposes when the concentrate is stored for 4 weeks at about 25°C, and (b) a solvent in an amount of at least about 15 % by volume of the concentrate.

71. (previously presented) The process of claim 70, wherein combining (a) and (b) results in a hydroxide ion concentration of not higher than about 6 moles per liter.

72. (previously presented) The process of claim 71, wherein not more than about 0.5 % of the at least one metal hydride compound decomposes when the concentrate is stored for 4 weeks at about 25°C.

P24712.A08

73. (previously presented) The process of claim 71, wherein the concentrate comprises the at least one metal hydride compound in a concentration of at least about 3 moles per liter.

74. (previously presented) The process of claim 73, wherein the hydroxide ion concentration in the concentrate is at least about 8 moles per liter.

75. (currently amended) The process of claim 71, wherein the at least one metal hydride compound comprises at least one of  $\text{NaBH}_4$ ,  $\text{KBH}_4$ ,  $\text{LiBH}_4$ ,  $\text{Be}(\text{BH}_4)_2$ ,  $\text{Ca}(\text{BH}_4)_2$ ,  $\text{Mg}(\text{BH}_4)_2$ ,  $(\text{CH}_3)_3\text{NBH}_3$ ,  $\text{NaCNBH}_3$ ,  $\text{LiH}$ ,  $\text{NaH}$ ,  $\text{KH}$ ,  $\text{CaH}_2$ ,  $\text{BeH}_2$ ,  $\text{MgH}_2$ ,  $\text{NaAlH}_4$ ,  $\text{LiAlH}_4$ , and  $\text{KAlH}_4$ .

76. (previously presented) The process of claim 70, wherein the at least one metal hydride compound comprises at least one of  $\text{NaBH}_4$  and  $\text{KBH}_4$ .

77. (previously presented) The process of claim 70, wherein the concentrate further comprises at least one of  $\text{LiOH}$ ,  $\text{NaOH}$ ,  $\text{KOH}$ ,  $\text{RbOH}$ ,  $\text{CsOH}$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{Mg}(\text{OH})_2$ ,  $\text{Ba}(\text{OH})_2$ , and  $\text{NH}_4\text{OH}$ .

78. (previously presented) The process of claim 77, wherein the solvent comprises at least one of water, methanol, ethanol, ethylene glycol, diethylene glycol, glycerol,

P24712.A08

acetone, methyl ethyl ketone, diethyl ketone, methyl acetate, ethyl acetate, dioxan, tetrahydrofuran, diglyme and triglyme.

79. (previously presented) The process of claim 74, wherein the concentrate comprises water, at least one of  $\text{NaBH}_4$  and  $\text{KBH}_4$ , and at least one of  $\text{NaOH}$  and  $\text{KOH}$ .

80. (previously presented) The process of claim 78, wherein the concentrate, if diluted to a hydroxide ion concentration of about 6 moles per liter, contains at least about 2 moles per liter of the at least one metal hydride compound.

81. (previously presented) The process of claim 70, wherein the concentrate is substantially free of any additives which adversely affect the stability of the at least one metal hydride compound.

82. (previously presented) The process of claim 73, wherein the concentrate is substantially free of plasticizers, detergents and antifreeze.

83. (previously presented) The process of claim 70, wherein the concentrate is substantially free of any stabilizer for the at least one metal hydride compound which is different from a hydroxide ion providing compound.

P24712.A08

84. (previously presented) A process for producing a packaged combination for making a fuel for use with a direct liquid fuel cell, the fuel comprising at least one metal hydride compound and a polar solvent and having a hydroxide ion concentration of not higher than about 7 moles per liter, wherein the process comprises providing a container having a first compartment and at least one second compartment, partially or completely filling the first compartment with a concentrate which differs from the fuel at least by comprising only a part of the polar solvent and by having a hydroxide ion concentration which is higher than the hydroxide ion concentration of the fuel, and partially or completely filling the at least one second compartment with an amount of polar solvent which in combination with the concentrate will afford the fuel.

85. (previously presented) The process of claim 84, wherein combining the concentrate in the first compartment with the solvent in the at least one second compartment results in a fuel having a hydroxide ion concentration of not higher than about 6 moles per liter.

86. (previously presented) The process of claim 85, wherein the concentrate is such that not more than about 2 % of the at least one metal hydride compound decomposes when the concentrate is stored for 4 weeks at about 25°C.

87. (previously presented) The process of claim 85, wherein the concentrate contains the at least one metal hydride compound in a concentration of at least about 3 moles per liter.

P24712.A08

88. (currently amended) The process of claim 84, wherein the at least one metal hydride compound comprises at least one of  $\text{NaBH}_4$ ,  $\text{KBH}_4$ ,  $\text{LiBH}_4$ ,  $\text{Be}(\text{BH}_4)_2$ ,  $\text{Ca}(\text{BH}_4)_2$ ,  $\text{Mg}(\text{BH}_4)_2$ ,  $(\text{CH}_3)_3\text{NBH}_3$ ,  $\text{NaCNBH}_3$ ,  $\text{LiH}$ ,  $\text{NaH}$ ,  $\text{KH}$ ,  $\text{CaH}_2$ ,  $\text{BeH}_2$ ,  $\text{MgH}_2$ ,  $\text{NaAlH}_4$ ,  $\text{LiAlH}_4$ , and  $\text{KAlH}_4$ .

89. (previously presented) The process of claim 88, wherein the concentrate further comprises at least one of  $\text{LiOH}$ ,  $\text{NaOH}$ ,  $\text{KOH}$ ,  $\text{RbOH}$ ,  $\text{CsOH}$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{Mg}(\text{OH})_2$ ,  $\text{Ba}(\text{OH})_2$ , and  $\text{NH}_4\text{OH}$ .

90. (previously presented) The process of claim 89, wherein the polar solvent comprises at least one of water, methanol, ethanol, ethylene glycol, diethylene glycol, glycerol, acetone, methyl ethyl ketone, diethyl ketone, methyl acetate, ethyl acetate, dioxan, tetrahydrofuran, diglyme and triglyme.

91. (previously presented) The process of claim 87, wherein the concentrate comprises water, at least one of  $\text{NaBH}_4$  and  $\text{KBH}_4$ , and at least one of  $\text{NaOH}$  and  $\text{KOH}$ .

92. (previously presented) The process of claim 84, wherein combining the concentrate with the solvent in the at least one second compartment affords a fuel having a concentration of the at least one metal hydride compound of at least about 3 moles per liter.

P24712.A08

93. (previously presented) The process of claim 84, wherein the concentrate is substantially free of any additives which adversely affect the stability of the at least one metal hydride compound.

94. (previously presented) The process of claim 84, wherein the concentrate is substantially free of plasticizers, detergents and antifreeze.

95. (previously presented) The process of claim 84, wherein the concentrate is substantially free of any stabilizer for the at least one metal hydride compound which is different from a hydroxide ion providing compound.

96. (previously presented) The process of claim 84, wherein the solvent in the at least one second compartment comprises at least one additive for the fuel.

97. (previously presented) The process of claim 96, wherein the additive is selected from plasticizers, detergents, and antifreeze.

98. (previously presented) The process of claim 96, wherein the solvent in the at least one second compartment comprises at least one of an aliphatic and an aromatic amine stabilizer for the at least one metal hydride compound.

P24712.A08

99. (previously presented) The process of claim 84, wherein the container is designed to allow a mixing of the concentrate in the first compartment and the polar solvent in the at least one second compartment inside the container.

100. (cancelled)

101. (previously presented) A container for providing a fuel for use with a direct liquid fuel cell, the fuel comprising at least one metal hydride compound and a polar solvent and having a hydroxide ion concentration of not higher than about 7 moles per liter, wherein the container comprises a first compartment and at least one second compartment, the first compartment containing a concentrate which comprises at least one metal hydride compound and a polar solvent and has a hydroxide ion concentration which is higher than the hydroxide ion concentration of the fuel, and the at least one second compartment containing a solvent, and wherein combining the solvent in the at least one second compartment and the concentrate in the first compartment affords the fuel.

102. (previously presented) The container of claim 101, wherein the container is sealed and allows a mixing of the concentrate and the solvent in the at least one second compartment before discharging same from the container.

P24712.A08

103. (previously presented) The container of claim 101, wherein the container is associated with instructions to allow the concentrate and the solvent in the at least one second compartment to mix before discharging same from the container.

104. (previously presented) The container of claim 101, wherein the first compartment and the at least one second compartment do not surround each other.

105. (previously presented) The container of claim 101, wherein the first compartment is at least partially surrounded by the at least one second compartment.

106. (previously presented) The container of claim 101, wherein the at least one second compartment is at least partially surrounded by the first compartment.

107. (previously presented) The container of claim 101, wherein the concentrate contains the at least one metal hydride compound in a concentration of at least about 3 moles per liter.

108. (currently amended) The container of claim 101, wherein the at least one metal hydride compound comprises at least one of  $\text{NaBH}_4$ ,  $\text{KBH}_4$ ,  $\text{LiBH}_4$ ,  $\text{Be}(\text{BH}_4)_2$ ,  $\text{Ca}(\text{BH}_4)_2$ ,  $\text{Mg}(\text{BH}_4)_2$ ,  $(\text{CH}_3)_3\text{NBH}_3$ ,  $\text{NaCNBH}_3$ ,  $\text{LiH}$ ,  $\text{NaH}$ ,  $\text{KH}$ ,  $\text{CaH}_2$ ,  $\text{BeH}_2$ ,  $\text{MgH}_2$ ,  $\text{NaAlH}_4$ ,  $\text{LiAlH}_4$ , and  $\text{KAlH}_4$ , and the concentrate further comprises at least one of  $\text{LiOH}$ ,  $\text{NaOH}$ ,  $\text{KOH}$ ,  $\text{RbOH}$ ,  $\text{CsOH}$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{Mg}(\text{OH})_2$ ,  $\text{Ba}(\text{OH})_2$ , and  $\text{NH}_4\text{OH}$ .



P24712.A08

109. (previously presented) The container of claim 108, wherein the polar solvent comprises at least one of water, methanol, ethanol, ethylene glycol, diethylene glycol, glycerol, acetone, methyl ethyl ketone, diethyl ketone, methyl acetate, ethyl acetate, dioxan, tetrahydrofuran, diglyme and triglyme.

110. (previously presented) The container of claim 101, wherein the concentrate comprises water, at least one of  $\text{NaBH}_4$  and  $\text{KBH}_4$ , and at least one of  $\text{NaOH}$  and  $\text{KOH}$ .

111. (previously presented) The container of claim 110, wherein combining the concentrate with the solvent in the at least one second compartment affords a fuel having a concentration of the at least one metal hydride compound of at least about 2 moles per liter.

112. (previously presented) The container of claim 101, wherein combining the concentrate with the solvent in the at least one second compartment affords a fuel having a concentration of the at least one metal hydride compound of at least about 3 moles per liter.

113. (previously presented) The container of claim 111, wherein the concentrate is substantially free of any additives which adversely affect the stability of the at least one metal hydride compound.

P24712.A08

114. (previously presented) The container of claim 101, wherein the concentrate is substantially free of any stabilizer for the at least one metal hydride compound which is different from a hydroxide ion providing compound.

115. (previously presented) The container of claim 113, wherein the solvent in the at least one second compartment comprises at least one additive for the metal hydride containing liquid.

116. (previously presented) The container of claim 115, wherein the additive is selected from plasticizers, detergents, and antifreeze.

117. (previously presented) The container of claim 101, wherein the solvent in the at least one second compartment comprises at least one of an aliphatic and an aromatic amine stabilizer for the at least one metal hydride compound.

118. (cancelled)

119. (previously presented) A packaged combination for providing a fuel for use with a direct liquid fuel cell, wherein the combination comprises a first container and at least one second container, the first container containing a concentrate which comprises at least one metal hydride compound and a polar solvent and has a hydroxide ion concentration which is higher than a hydroxide ion concentration of the fuel, and the at

P24712.A08

least one second container containing a solvent in an amount sufficient to result in the fuel if the solvent in the at least one second container and the concentrate in the first container are combined.

120. (previously presented) The packaged combination of claim 119, wherein the combination is associated with instructions to combine the concentrate in the first container with at least a part of the solvent in the second container.

121. (previously presented) The packaged combination of claim 119, wherein the concentrate contains the at least one metal hydride compound in a concentration of at least about 3 moles per liter.

122. (previously presented) The packaged combination of claim 121, wherein after storing the concentrate for 4 weeks at about 25°C not more than about 2 % of the at least one metal hydride compound has decomposed.

123. (currently amended) The packaged combination of claim 119, wherein the at least one metal hydride compound comprises at least one of  $\text{NaBH}_4$ ,  $\text{KBH}_4$ ,  $\text{LiBH}_4$ ,  $\text{Be}(\text{BH}_4)_2$ ,  $\text{Ca}(\text{BH}_4)_2$ ,  $\text{Mg}(\text{BH}_4)_2$ ,  $(\text{CH}_3)_3\text{NBH}_3$ ,  $\text{NaCNBH}_3$ ,  $\text{LiH}$ ,  $\text{NaH}$ ,  $\text{KH}$ ,  $\text{CaH}_2$ ,  $\text{BeH}_2$ ,  $\text{MgH}_2$ ,  $\text{NaAlH}_4$ ,  $\text{LiAlH}_4$ , and  $\text{KAlH}_4$ , and the concentrate further comprises at least one of  $\text{LiOH}$ ,  $\text{NaOH}$ ,  $\text{KOH}$ ,  $\text{RbOH}$ ,  $\text{CsOH}$ ,  $\text{Ca}(\text{OH})_2$ ,  $\text{Mg}(\text{OH})_2$ ,  $\text{Ba}(\text{OH})_2$ , and  $\text{NH}_4\text{OH}$ .

P24712.A08

124. (previously presented) The packaged combination of claim 121, wherein the concentrate comprises water, at least one of  $\text{NaBH}_4$  and  $\text{KBH}_4$ , and at least one of  $\text{NaOH}$  and  $\text{KOH}$ .

125. (previously presented) The packaged combination of claim 121, wherein combining the concentrate with the solvent in the at least one second container affords a fuel having a concentration of the at least one metal hydride compound of at least about 2 moles per liter.

126. (previously presented) The packaged combination of claim 119, wherein combining the concentrate with the solvent in the at least one second container affords a fuel having a concentration of the at least one metal hydride compound of at least about 3 moles per liter.

127. (previously presented) The packaged combination of claim 119, wherein the concentrate is substantially free of any additives which adversely affect the stability of the at least one metal hydride compound.

128. (previously presented) The packaged combination of claim 119, wherein the concentrate is substantially free of plasticizers, detergents and antifreeze.

P24712.A08

129. (previously presented)      The packaged combination of claim 128, wherein the concentrate is substantially free of any stabilizer for the at least one metal hydride compound which is different from a hydroxide ion providing compound.

130. (previously presented)      The packaged combination of claim 119, wherein the solvent in the at least one second container comprises at least one additive selected from plasticizers, detergents, and antifreeze.

131. (previously presented)      The packaged combination of claim 119, wherein the solvent in the at least one second container comprises at least one of an aliphatic and an aromatic amine stabilizer for the at least one metal hydride compound.

132. (previously presented)      A method of reducing the decomposition of a fuel for a direct liquid fuel cell during storage of the fuel, wherein the method comprises storing the fuel as a concentrate and diluting the concentrate to prepare the fuel only before using the fuel in the fuel cell, the concentrate comprising at least one metal hydride compound, a polar solvent, and at least one hydroxide ion providing compound, wherein after storing the concentrate for 4 weeks at about 25°C not more than about 2 % of the at least one metal hydride compound has decomposed.

P24712.A08

133. (previously presented) The method of claim 132, wherein the at least one metal hydride compound comprises at least one of  $\text{NaBH}_4$ ,  $\text{KBH}_4$ ,  $\text{LiBH}_4$ ,  $\text{LiH}$ ,  $\text{NaH}$ , and  $\text{KH}$ .

134. (previously presented) The method of claim 133, wherein the concentrate comprises the at least one metal hydride compound in a concentration of at least about 3 moles per liter.

135. (previously presented) A container for making a fuel for use with a direct liquid fuel cell, wherein the container comprises a first compartment and at least one second compartment, the first compartment containing a concentrate which comprises at least one metal hydride compound and a polar solvent and has a hydroxide ion concentration which is higher than a hydroxide ion concentration of the fuel, and the at least one second compartment containing a solvent in an amount which is sufficient to afford the fuel if the solvent in the at least one second compartment and the concentrate in the first compartment are combined, and wherein after storing the concentrate for 4 weeks at about  $25^\circ\text{C}$  not more than about 2 % of the at least one metal hydride compound has decomposed.

136. (previously presented) The container of claim 135, wherein the concentrate contains the at least one metal hydride compound in a concentration of at least about 3 moles per liter.

P24712.A08

137. (previously presented)      The container of claim 135, wherein combining the concentrate with the solvent in the at least one second compartment affords a fuel having a concentration of the at least one metal hydride compound of at least about 3 moles per liter.

138. (previously presented)      The container of claim 136, wherein combining the concentrate with the solvent in the at least one second compartment affords a fuel having a concentration of the at least one metal hydride compound of at least about 2 moles per liter.

139. (previously presented)      A process for filling a liquid fuel cell, wherein the process comprises using the container of claim 101 as a filling device for the fuel cell.